

REMARKS

Claims 1-12 were examined and reported in the Office Action. Claims 1-12 are rejected. Claims 1-12 remain.

Applicants request reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 103(a)

It is asserted in the Office Action that claims 1-12 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 5,850,409 issued to Link ("Link") in view of U. S. Publication No. 2002/0009109 by Asano ("Asano"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2142

[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974))." *"All words in a claim must be considered in judging the patentability of that claim against the prior art."* (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's claim 1 contains the limitations of

an optical output detector which detects an optical power output from the laser diode and converts the optical power into a voltage;
a bias current controller which detects a maximum level of the

voltage and outputs a first control value corresponding to a difference between the maximum level and a first reference voltage, the bias current controller consists of a top holder and an automatic power controller; a modulation current controller which detects a minimum level of the voltage and outputs a second control value corresponding to a difference between the minimum level and a second reference voltage, the modulation current controller consists of a bottom holder and an automatic modulation controller; and a laser diode driver which outputs a drive current to the laser diode according to the first and second control values.

Link discloses a laser modulation control circuit that is designed to minimize circuit complexity that maintains transmitted optical data amplitude at a constant value, regardless of variations due to operating temperature or laser aging. As the objective of Link is to minimize complexity, adding a peak error detector and a bottom error detector teaches away from this objective (Link, column 2, lines 26-39).

Asano discloses a laser diode driver circuit that provides an automatic power control for a laser diode. Asano further discloses a peak error detector 4 including a peak hold circuit 41 and an operational amplifier 42 with a feedback resistor 43; and a bottom error detector 5 including a bottom hold circuit 51 and an operational amplifier 52 with a feedback resistor 53 (see Asano, Fig. 2). Asano's laser driver circuit concerns improving the start-up period.

Adding the peak hold and bottom hold to Link would add further complexity to the modulation control circuit and, therefore, would also change the way the circuit behaves. As the objective of Link would be taught away from, there would not be any motivation to combine the peak and bottom holders from Asano with the circuit of Link.

Moreover, by viewing the disclosure of Asano in view of no other prior art, one can not jump to the conclusion of obviousness without impermissible hindsight. According to MPEP 2142,

[t]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination

whether the claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made to a laser diode circuit to compensate for a change in characteristics including

a bias current controller which detects a maximum level of the voltage and outputs a first control value corresponding to a difference between the maximum level and a first reference voltage, the bias current controller consists of a top holder and an automatic power controller; a modulation current controller which detects a minimum level of the voltage and outputs a second control value corresponding to a difference between the minimum level and a second reference voltage, the modulation current controller consists of a bottom holder and an automatic modulation controller.

Since there would not be any motivation to combine the teachings of Asano with the circuit of Link, Applicant's claims 1 and 7 are not obvious over Link in view of Asano since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 7, namely claims 2-6, and 8-12, respectively, would also not be obvious over Link in view of Asano for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1-12 are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely 1-12, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

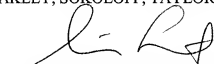
PETITION FOR EXTENSION OF TIME

Per 37 C.F.R. 1.136(a) and in connection with the Office Action mailed on July 27, 2006, Applicant respectfully petitions the Commissioner for a two (2) month extension of time, extending the period for response to December 27, 2006. The Commissioner is hereby authorized to charge payment to Deposit Account No. 02-2666 in the amount of \$225.00 to cover the petition filing fee for a 37 C.F.R. 1.17(a)(2) small entity. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Dated: December 8, 2006

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CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below to the United States Patent and Trademark Office.


Jean Svoboda

Date: December 8, 2006